CLAIMS:

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- 1. Medical imaging device (1), comprising an X-ray source (2) for providing an X-ray image of an object, an X-ray detector (3) to derive image data from said X-ray image and display means (5) for displaying the image data, <u>characterized in that</u>, the X-ray detector (3) has an adjustable detector orientation relative to the object, the display means (5) have an adjustable display orientation relative to a viewer, and orientation control means (8) are provided for rendering the detector orientation and the display orientation essentially equal.
- 2. Medical imaging device according to claim 1, wherein the orientation control means (8) are arranged for automatically coupling the detector orientation and the display orientation.
 - 3. Medical imaging device according to claim 1, wherein the orientation control means (8) are arranged for automatically providing a signal to a user in case the detector orientation and the display orientation are different.
 - 4. Medical imaging device according to claim 1, 2 or 3, wherein the orientation control means (8) comprise means (9) for detecting the detector orientation.
- 5. Medical imaging device according to claim 1, 2, 3 or 4, wherein the orientation control means (8) comprise means (10) for detecting the display orientation.
 - 6. Medical imaging device according to claim 4 and 5, wherein the orientation control means (8) are arranged to compare the detector orientation to the display orientation.
- 7. Medical imaging device according to claim 6, wherein the orientation control means (8) are arranged for automatically adjusting the display orientation such that it is essentially equal to the detector orientation.

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8. Medical imaging device according to claim 6, wherein the orientation control means (8) are arranged for automatically adjusting the detector orientation such that it is essentially equal to the display orientation.

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- Medical imaging device according to claim 3, wherein the signal comprises a message on the display means (5) indicating that the display orientation needs to be adjusted.
 - 10. Medical imaging device according to one or more of the preceding claims, wherein the processing means are arranged for controlling the orientation control means (8).